

Dipankar Maitra

Your Background and Experience

This section of the survey aims to gather information about your expertise in these areas to ensure that our board is equipped with the necessary skills and experience to effectively lead and support our mission. Your responses will help us assess your fit for a potential board role and identify areas where we may need additional training or support.

We don't expect any candidate to have relevant background in all these areas. Please respond to the topics for which you do bring experience, and feel free to skip the others.

Strategic Plan Implementation

The new strategic plan expands AAVSO's mission and goals to encompass all aspects of astronomy where amateur activities (making observations, analyzing data, and educating the public) can contribute to scientific discovery. Our focus is now on implementation, working closely with the Executive Director to enhance current programs and develop new initiatives that will help achieve these goals.

How much experience do you have with strategic planning and implementation?

Basic Experience: Assisted, or have basic understanding.

Please describe your experience and accomplishments in strategic planning and implementation.

I have been member of various strategic planning committees at Wheaton College (MA) where I work. I have also been a member of the Executive council of the Wheaton chapter of the American Association of University Professors (AAUP) where we worked on creating and implementing college-wide policies for equitable workload distribution, full-time contracts, etc. As an recent AAVSO board member I have also been learning, and contributing towards AAVSO's strategic plans and their implementation.

Please discuss your willingness to critically assess the implementation and effectiveness of the Strategic Plan if performance metrics and "gut feel" show that the plan is NOT working? Do you have experience with plans that failed to perform as expected?

I am willing to participate in such a critical assessment, however I am not an expert in this, and will need to guidance as we navigate through issues as a team.

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Governance and Oversight

Governance and Oversight, including policy development, financial oversight, resource allocation, program evaluation.

How much experience do you have in Governance and Oversight?

Basic Experience: Assisted, or have basic understanding.

Please describe your experience and accomplishments in the area of governance and oversight.

At our college faculty governance is central to most academic issues. Over the years I have been on various committees on policy development on a wide range of the college's operation and administration-related issues. At the department-level, I have also been involved in evaluation of our program (e.g. majors and minors) over the years.

Advocacy and Public Relations

Including community engagement, campaigns and initiatives, being a spokesperson, event promotion, application of social media, storytelling, media relations, product and organization branding, government agency relations:

How much experience do you have with Advocacy and Public Relations?

Moderate Experience: Actively participated.

Please describe your experience and accomplishments in the area of advocacy and public relations.

I value public engagement immensely. I have represented our college, and our local astronomy community, in numerous public outreach events. I also organize weekly public open nights at our college's on-campus observatory. In addition to showing the public the treasure of the night sky, during these open nights I also train students how to be engage with the visitors and develop public-speaking skills.

Fundraising

Including managing fundraising campaigns, soliciting sponsors, cultivating donors, preparing or evaluating grant proposals, building partnerships.

How much experience do you have with Fundraising?

Basic Experience: Assisted, or have basic understanding.

Please describe your experience and accomplishments in the area of fundraising.

Not very much. Although I have accompanied the college's fundraising team to various places, and engaged in discussions with potential donors. However I have written, and been awarded,

numerous scientific, research-related proposals. These proposals, when awarded, have brought in significant resources to the college.

Education and Training

For life-long adult learners will be an important initiative for AAVSO in the next few years (including identification of learning objectives, development of classes/curricula, interaction with colleges/universities and grant agencies, assessment of effectiveness).

How much experience do you have with Education and Training?

Advanced Experience: Lead a successful team.

Please describe your experience and accomplishments in the area of Education and Training.

I have been an active researcher in astronomy and astrophysics for the past 24 years, and an active educator for the past 12 years. am currently an Associate Professor of Physics and Astronomy at Wheaton College in Massachusetts. Over the years I have taught nearly every Astronomy class offered at our institution, and many of the core Physics classes such as Introductory Physics, Research Experience in Physics, Scientific Computing, Classical Mechanics, and Quantum Mechanics. During this time I have mentored and trained several undergraduate students every year in various research projects.

Astronomy Research Projects

Identifying and pursuing Astronomy Research projects with Citizen-science activities will be an important initiative for AAVSO in the next few years (including identifying research questions/problems, recruiting participants, organizing and leading teams, defining approaches, forming professional-amateur collaborations, identifying funding needs, evaluating interim results and course-corrections, reaching conclusions, publication).

Please describe your experience and accomplishments in the area of Astronomy Research Projects

Some of my recent, and continuing research projects include: probing environments very close to black holes and neutron stars (this is my main research focus, and as of 2025-Aug-09 I have authored or coauthored 66 refereed papers on these topics, awarded numerous NASA grants to observe these targets, member of multiple NASA proposal review and Chandra/Swift/RXTE/NuStar/etc. observatory time-allocation committees, reviewer for peer-reviewed professional journals such as The Astrophysical Journal, Monthly Notices of Astronomy and Astrophysics, Nature, Astronomy and Astrophysics); polarimetry of astronomical objects (observations of Solar coronal polarization during total solar eclipses; leading AAVSO's nascent Special Interest Group in Polarimetry); variable star photometry and similar time-domain astronomy (actively engaging undergraduate students in data collection, analysis, submission to AAVSO, and disseminating results in conferences and journals).

How much experience do you have with Astronomy research projects

Advanced Experience: Lead a successful team.

Citizen Science

AAVSO is one of the oldest and most respected Citizen Science organizations in the world. Expanding on this legacy will be an important initiative during the next few years (including engaging participants both within and beyond the AAVSO community, expanding opportunities for collecting new data and for mining existing databases, maintaining primary focus on achieving tangible scientific outcomes, engaging both professional and non-professional participants, maintaining communication among team members).

How much experience do you have with Citizen Science

Advanced Experience: Lead a successful team.

Please describe your experience and accomplishments in the area of Citizen Science

I started as an amateur astronomer, and have remained an amateur astronomer at heart even after becoming a professional astronomer/astrophysicist. I am currently an AAVSO Board member, and enjoying participating in, and contributing to, several of AAVSO's working committees to promote Citizen Science. I am a member of AAVSO's Education and Public Outreach Committee. I am also leading AAVSO's Special Interest Group in Polarimetry, where we are assessing whether AAVSO can engage with the increasing number of amateur astronomers carrying out polarimetric observations of astronomical objects. Another citizen science project: Given the recent surge in white-light images of the Sun, taken by citizen scientists around the world using smart telescopes and DSLRs, I have developed an easy to use online tool that will de-rotate a user-uploaded image so that the direction of the solar north pole points upwards and the solar east limb points towards the left of the de-rotated image. This will allow citizen scientists to compare each other's images easily since the original images are affected by field-rotation, camera's detector orientation, and such. Folks using this tool have already created composites from their own images, showing the rotation of the Sun, and created 3D stereographic images of the Sun from their own images taken a few hours apart. I hope to submit a manuscript to the Journal of the AAVSO soon, to describe this tool, so that it can hopefully be used by a broader audience.

Please describe your experience in areas that are NOT science oriented but might provide insight into promoting effective citizen science. For example, many of the challenges of running an arts organization may feed directly effectively managing and motivating volunteers in a Citizen Science organization.

None that I can think of.

Other skills & experience: What experiences and skills in your background – NOT directly related to the AAVSO – do you think would be valuable for the AAVSO? We need people who bring diverse perspectives and experiences to the organization.

Multilingual (fluent in English, Hindi and Bengali; conversational in Nepali; smattering of Dutch [just enough to not starve if stranded in the middle of The Netherlands]). Network of professional X-ray astronomers throughout the world. Good connections with a few astronomical communities and organizations in India (where I grew up).

Your current/past involvement with AAVSO

This section of the survey is designed to gather information about your experience with the AAVSO. Understanding your familiarity and involvement with our organization helps us assess your potential contributions as a board member and ensures that we have a diverse range of perspectives and expertise to guide our mission. Your insights are invaluable in helping us build a stronger, more effective leadership team.

How many years have you been involved with the AAVSO (as a member, a non-member participant, or in other ways)?

I have been a member of the AAVSO for more than a decade. During this time I have submitted many photometric observations, mostly in collaboration with my students. For that past few months, I have been in AAVSO's Board.

Why do you want to serve on the AAVSO Board of Directors?

As noted in my brief bio posted on the AAVSO website, I am constantly searching for better ways to involve students and amateur astronomers in astronomical research, and to make physics and astronomy classes more welcoming and inclusive. I am also equally interested in public outreach and expanding astronomy (and general science) awareness among the general public. In the current geopolitical climate, organizations like AAVSO can play an important role in bringing science down from the ivory towers of scientists to the reach of the common people. Also, unlike many other scientific disciplines, citizen scientists can make significant contribution to astronomy, and AAVSO can (and does) play an extremely vital role in bridging the pro-am gap. I would like to serve on the AAVSO Board of Directors to contribute to these efforts that I also am passionate about.

What are your current and past activities involving AAVSO?

In the past I have primarily been as observer, and contributed photometric observations of variable stars, predominantly in collaboration with my students. Since joining the AAVSO Board a few months ago I have taken on a few additional roles: I am currently leading the Polarimetry Special Interest Group within AAVSO. We are exploring ways to better connect, engage, and encourage amateur polarimetrists so that the data collected by them is of high quality, and can be used by others including professional astronomers. I am also a member of the Education and Public Outreach Committee. I attend the monthly Board meeting and contribute to the ongoing discussions and decisions.

In your opinion, what are the greatest strengths of AAVSO?

I think AAVSO greatest strengths are its strong and experienced observer base, and also AAVSO's 100+ year-old database.

If elected to the Board, how would you help AAVSO translate those strengths into opportunities?

The strong observer base can contribute (even better) high-quality data, engage in (even more, and broader) pro-am collaborations and research projects. Our 100+ year old database can be (more) effectively mined to reveal hidden stellar properties. If elected to the Board I would work towards creating more, and varied, opportunities for AAVSO members to contribute different types of astronomical data (e.g. photometric, spectroscopic, polarimetric, solar observations) to our databases, and be able to foster successful and productive pro-am collaborations. I would also try to find more ways to engage citizen scientists so that they not only contribute new data, but also help in data-mining our archives.

In your opinion, what are the greatest weaknesses of AAVSO?

Only a small fraction of the amateur astronomy community actively participates in any form of research-grade work such as photometry. Many serious amateur astronomers are avid astrophotographers and while they will spend uncountably many hours creating a "nice" colored astrophoto, I think we have not yet fully tapped into their potential to do variable star work, or similar research. Another possibility is to improve our relationships with high-schools and undergraduate institutions where astronomy is taught. Very few students who take astronomy classes at such places become professional astronomers, but most of the students take these classes because of their interest in astronomy. If even some of these students can become AAVSO members, they can find a community to continue their interests, and contribute to science!

If elected to the Board, how would you help the AAVSO effectively meet those challenges?

If elected to the Board, I will seek to create greater opportunities for collaboration between AAVSO and educational institutions (in fact, in the past few months the Board has taken a few positive steps in this direction). I will also encourage greater engagement with local astronomical communities and clubs, so that (more of) their members get involved in, e.g. photometry of variable stars. With the advent of increasingly larger-aperture smart telescopes, this should become easier to do.

In your estimation, does the AAVSO run the risk of becoming too narrow, when the Strategic Plan (see above) suggests a continuing need to adapt to changing conditions and to think laterally?

I don't think AAVSO runs the risk of becoming too narrow. Everything around us, including the technology we constantly use, is changing rapidly, and the strategic plan needs to incorporate adaptability and flexibility. In fact, if we don't adapt, I fear that we run the risk of becoming obsolete.